

REMARKS

Claim Objections

Claims 4, 8, 12, 15 and 20 stand objected to based on the use of the term “second transparent layer” without the use of a corresponding “first transparent layer.”

These claims have been canceled, rendering the objection moot.

It is noted that the term “second transparent substrate,” as well as the corresponding “first transparent substrate,” are present in each of the remaining independent claims (claims 1 and 23)

Claim Rejections - 35 USC 112

Claims 1, 3-5, 7-9, 11, 12, 15, 17, 19 and 20 stand rejected under 35 USC 112, second paragraph.

Claim 1 stands rejected based on the use of the term “said conductive oxide layer” without antecedent basis. Claim 1 has been simplified to recite an OLED instead of the various constituent parts of an OLED (the conductive oxide layer being one of these parts), which resolves this issue.

Claims 1, 3-5, 7-9, 11, 12, 15, 17, 19 and 20 stand rejected based on the use of the term “assume a non-planar form.” The language in question has been removed from all claims.

The Applicants respectfully request reconsideration and withdrawal of these rejections.

Claim Rejections - 35 USC 102

Claims 1-20 stand rejected as anticipated by Isaka et al.

Isaka is directed to a “Light Emitting Device Having Convex-And-Concave Structure On Substrate.” The specific part of Isaka discussed in the office action is col. 8, lines 8-21 and figure 5. Isaka, col. 8, lines 8-21 discloses the formation of microlenses by coating a UV curing resin on a substrate, and then exposing to UV radiation to form lenses. Isaka, col. 8, lines 8-21 also discloses the pressing of a plate having convex and concave structures on a resin, to form corresponding structures in the resin.

As amended, each of the independent claims of the present application (claims 1 and 23) requires two substrates attached to each other. A device is fabricated on the first substrate, and the second substrate has a non-planar surface. The first substrate is attached to the second

substrate. This limitation distinguishes over Isaka, which discloses the use of only a single substrate.

The use of two substrates is not a trivial distinction. Because the lenses and the devices of Isaka are fabricated on different sides of the same substrate, one of the two must be present while the other is fabricated. OLEDs are sensitive to various processing techniques, and are easily damaged. So, if the OLEDs are fabricated first, they may be damaged by exposure to the processing techniques used to fabricate the lenses. It is also desirable to use standard process techniques to fabricate the OLEDs. If the lenses are fabricated first, the presence of the lenses may interfere with the fabrication of the OLEDs by contaminating a vacuum chamber, or by making the substrate difficult to work with due to its non-planar nature.

By using two substrates, the present invention as claimed provides a solution to these problems. The OLEDs may be fabricated on a flat substrate, without the presence of a non-planar substrate. A non-planar substrate may be separately fabricated, without the presence of sensitive OLEDs that may be damaged. Then, the two substrates may be attached. The techniques used to attach two substrates, such as the application of index matching gel, are much less likely to damage the OLEDs than the techniques used to fabricate non-planar features, such as the application of resin, UV-curing, and pressure sufficient to mold resin.

It is noted that Isaka discloses and claims the use of two substrate, for example substrates 4 and 9 of Fig. 1 (see Isaka, col. 4, line 39 - col. 5, line 11; Isaka, claim 1). These two substrate are disposed on opposite sides of the light emitting device, and are therefore not attached to each other in the same sense as required by the claims of the present application. Because the Isaka substrates are on opposite sides of the light emitting device, they do not, for example, address the issue that either the device or the concave-and-convex structure must be present on at least one substrate while the other is fabricated on the same substrate.

It is also noted that the office action at page 3, discussing claim 4, indicates that Isaka discloses the lamination of a first layer to a second layer to create a non-planar surface. The Applicants respectfully assert that Isaka, col. 8, lines 8-21, do not disclose a first substrate having a device fabricated on a first surface thereof, and having a second surface attached to another substrate, as required by the claims as amended.

Claims 4-20 have been canceled, rendering moot the rejections of those claims.

Claims 2-3, 21-22, and 24-27 are each dependent on one of claims 1 and 23, and are allowable for at least the same reasons.

Additional Comments

Support for the claim amendments may be found in the specification at Fig. 2b (disclosing one substrate attached to another), and at page 11 (disclosing the use of index matching gel to attach substrates and lenses).

CONCLUSION

Withdrawal of all pending objections and rejections, and allowance of the above-reference application, is respectfully requested.

Respectfully submitted,

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